

CERVICAL CANCER

BACKGROUND

Facts about cervical cancer

- Cervical cancer accounts for about 2% of all cancers found in Massachusetts women.
- Cervical cancer is frequently detected at a very early stage, called *preinvasive*, before it has gone beyond the surface cells of the cervix. The average age for diagnosis of this preinvasive cancer is the late 30s.
- Cervical cancer, if found in the preinvasive stage, can be cured almost 100% of the time.
- Having Pap tests and pelvic examinations according to recommended guidelines nearly eliminates invasive cervical cancer.

What is cervical cancer?

- The cervix is a part of a woman's reproductive system. It is the narrow, lower portion of a woman's uterus (the muscular organ that carries a developing fetus or baby), the birth canal.
- Abnormal cells of the cervix may develop into cancer over time. There are two major types of cervical cancer: squamous cell carcinomas and adenocarcinomas. The type of cervical cancer depends on where in the cervix the cancer begins.
 - Squamous cell carcinomas account for about 85-90% of cervical cancers and develop on the outer portion of the cervix that meets with the vagina. Squamous cell carcinomas also develop where the inner and outer portion of the cervix meet called the transformation zone.
 - Adenocarcinomas account for about 10-15% of cervical cancers and develop on the inner portion of the cervix that meets the uterus. The adenocarcinomas develop from the mucus producing gland cells.

What are the signs and symptoms of cervical cancer?

Although symptoms for cervical cancer are rare, any of the following should be checked by a health care professional:

- Vaginal discharge that may be light, watery, or bloody in appearance between periods, and may smell different from normal
- Menstrual bleeding that may last longer and have a heavier flow than usual
- Unusual vaginal bleeding
- Bleeding after sexual intercourse
- Pain in the lower back, pelvic area, or vagina
- Weight loss or loss of appetite
- Urinary problems or constipation

Talk with your health care professional about any symptoms you may be experiencing.

What are the risk factors for cervical cancer?

Known risk factors for cervical cancer include:

- Age (Cervical cancer can happen at any age, but the chances of having cervical cancer are highest in women age 45 and older.)
- Family history of cervical cancer
- Being infected with certain types of human papillomavirus (HPV, the virus that causes genital warts)
- Having sexual intercourse before age 19
- Having multiple sexual partners or a partner who has had multiple sexual partners
- Having unprotected intercourse (having sex without a condom)
- Smoking
- Having a weakened immune system (for example, due to infection with HIV (human immunodeficiency virus, the virus that causes AIDS))
- Having a past or current Chlamydia infection
- Long-term oral contraception use
- Multiple pregnancies

Possible risk factors:

- Eating a diet low in vitamin A, vitamin C, and/or folic acid
- Exposure to secondhand smoke

PREVENTION AND SCREENING

How can I reduce my risk of developing cervical cancer?

To lower the risk of cervical cancer:

- Delay sexual activity until after age 18
- Limit your number of sex partners
- Use a barrier method of protection (a condom) when you have sex
- Don't smoke and avoid secondhand smoke
- Eat a diet high in fruits, vegetables, and folic acid

If you have a daughter, between the ages of 9 and 12, there is a new vaccine (Gardasil) that can be given to help protect her from the human papillomavirus (HPV) types 6, 11, 16, and 18. HPV types 16 and 18 are responsible for 90% of genital wart infections. This shot is most effective when given to a female that has not been sexually active.

There are studies being done to see whether the vaccine can be given to older women who may have limited exposure to HPV. It is always best to talk with your doctor to find out if the vaccine would be a good alternative in protecting yourself or your female family members from HPV and cervical cancer.

Screening for cervical cancer

Since there are usually no early warning signs of cervical cancer, it is extremely important for all women age 18 and older to have a pelvic exam and a Pap test (or Pap smear) annually. Sexually active women younger than age 18 should also have regularly scheduled pelvic exams and Pap tests.

The yearly Pap tests (or Pap smear) has helped decrease the possibility of getting cervical cancer by detecting the change in cervical cells before they can develop into an invasive disease.

The Pap smear can be done two different ways.

- The cervical cells can be scraped or brushed off the cervix and placed directly onto a slide. A fixative is sprayed on the cells to stick them to the slide.
- Thin Prep test allows the health care professional to place the cervical cells that are scraped or brushed off the cervix into a vial with a liquid preservative. The vial is sent to the laboratory where the cells are spun out of the liquid then placed on a slide.

The slides are reviewed by a cytologist and /or pathologist.

DIAGNOSIS AND TREATMENT

This site provides general information that may apply to your specific situation. You may choose to visit the National Cancer Institute's web site , www.cancer.gov, which is updated more frequently. Once there, you will be able to select from a full range of cancer topics. If you want to speak with a cancer information expert confidentially, you can call 1-800-4CANCER (1-800-422-6237) between 9:00 AM – 4:30 PM.

It is always best to discuss your personal risk for cancer as well as your screening, diagnosis, and treatment needs with your health care provider before you commit to a course of action.

How is cervical cancer diagnosed?

If the results of a Pap test are mildly abnormal, it is usually repeated in three to six months.

Dysplasia (abnormal or changing cells) detected on a Pap test is best evaluated by *colposcopy*. Colposcopy is an examination of the cervix and vagina using an instrument with a light that magnifies the cervix. The health care professional can then do a *biopsy* (a small piece of tissue is taken from that area) to examine under a microscope. This procedure is called a *directed biopsy*. Performing the biopsy may cause mild cramping.

Endocervical curettage (ECC – collecting cells from the uterus to be looked at under a microscope) and *loop electrocautery excision procedure* (LEEP – passing an electric current through a thin wire to painlessly remove abnormal tissue) can also be done during colposcopy. This is usually done in a health care professional's office.

A *cone biopsy* (surgically removing a cone-shaped portion of cervical tissue) may be needed if there is more than one abnormal Pap test, if the health care professional can't see all of the cancer, or if the health care professional thinks there might be invasive cancer. This procedure can be done in the doctor's office. A cold knife cone biopsy is done with a surgical scalpel or a

laser and requires general anesthesia to put the patient asleep. This surgery is done as day surgery.

How is cervical cancer treated?

The method of treating cervical cancer depends upon the stage of the disease. The earlier the disease is found, the better the chance of being cured.

Preinvasive cervical cancer can be cured almost 100% of the time. It can be treated with any of the following methods:

- *Conization* (surgically removing a cone-shaped portion of the cervix, including the cancer and normal tissue around it)
- *Cryosurgery* (freezing to remove tissue)
- *Laser surgery* (using a high intensity beam of light to remove tissue)
- *Electrosurgical excision* (using a thin loop with electrical energy to remove tissue from the cervix)

In many cases, you can have children after treatment for pre-invasive cervical cancer.

In contrast, invasive cervical cancer usually requires a *hysterectomy* (removal of the uterus and cervix) and you cannot have children.

Radiation can be administered as *external beam radiation therapy* (a concentrated x-ray beam that will be aimed at the cancer) or *brachytherapy* (a capsule of radioactive material placed internally near the cancer).

Chemotherapy is used when the cancer is widespread, or if it has come back after earlier treatment.

STATISTICS

How many people are diagnosed with cervical cancer? How many people die of it?

- The American Cancer Society estimates in 2008 there will be 11,070 new cases of cervical cancer in the United States. There will be an estimated 200 new cases of cervical cancer in 2008 in Massachusetts.
- The American Cancer Society also estimates in 2008 there will be 3,870 deaths from cervical cancer in the United States. There is no 2008 estimate for deaths from cervical cancer in Massachusetts.
- National five-year relative survival rates for 1996-2004 show that 81.2% of females under 50 years of age and 59.3% of females that are 50 years of age and over survive five years after a diagnosis of cervical cancer.

Information provided in these web pages was last updated on August 4, 2008

- In Massachusetts between 2001 and 2005, the age-adjusted incidence rate of cervical cancer for women was 6.3 per 100,000 females.
- The age-adjusted mortality rate for cervical cancer in Massachusetts women was 1.5 per 100,000 females between 2001 and 2005.
- The age-adjusted incidence rate of cervical cancer is 25.9% lower in Massachusetts than nationally (based on data from the North American Association of Central Cancer Registries, 2001-2005).
- The age-adjusted mortality rate of cervical cancer is 40.0% lower in Massachusetts than nationally (based on data from the North American Association of Central Cancer Registries, 2001-2005).

For additional statistics on cervical cancer in Massachusetts, see Massachusetts Community Health Information Profile (MassCHIP) Instant Topics-Cancer: Cervical [<http://masschip.state.ma.us/InstantTopics/affiliate.htm>]. Please click on an affiliation, select Cancer in the instant topics, and then select Cancer: Cervical.

DPH PROGRAMS AND INFORMATION

DPH cervical cancer programs

Clients receiving their healthcare at a Men's Health Partnership or Women's Health Network participating health care centers are provided individualized care coordination and personalized lifestyle coaching. These additional services will make it easier for clients to follow through with healthcare provider's recommendations, adopt healthier lifestyles, and therefore attain a better health outcome. This is just one of the Division of Health Promotion and Disease Prevention's efforts focusing on health disparities.

Publications and materials

Reports

The following reports can be accessed from the Massachusetts Cancer Registry website at <http://www.mass.gov/dph/bhsre/mcr/canreg.htm>:

- *Cancer Incidence and Mortality in Massachusetts, 2001-2005*
- *Cancer Incidence in Massachusetts 2001-2005: City and Town Supplement*

Pamphlets, Brochures and Videos

The breast and cervical cancer publications are available through the Massachusetts Health Promotion Clearinghouse by calling 1-800-952-6637 or visiting www.maclclearinghouse.com

RELATED LINKS

Background/General Links

American Cancer Society (ACS)

- Cancer Reference Information: All About Cervical Cancer
http://www.cancer.org/docroot/cricri_2x.asp?sitearea=cricri&dt=8

Harvard School of Public Health

- Disease Risk Index
<http://www.diseaseriskindex.harvard.edu/update/>

National Cancer Institute (NCI)

- Cervical Cancer Home Page
<http://www.cancer.gov/cervix>
- What You Need To Know About Cancer of the Cervix
http://www.cancer.gov/templates/doc_wyntk.aspx?viewid=1529727f-0309-4f59-aa5f-a17a761f10d9

Prevention and Screening Links

Centers for Disease Control and Prevention (CDC)

- The National Breast and Cervical Cancer Early Detection Program
<http://www.cdc.gov/cancer/nbccedp>

National Cancer Institute (NCI)

- Cervical Cancer (PDQ): Prevention
http://www.cancer.gov/cancer_information/doc_pdq.aspx?version=patient&viewid=a2409fa2-ff12-41e7-9f5d-2911d566d242
- Cervical Cancer (PDQ): Screening
http://www.cancer.gov/cancer_information/doc_pdq.aspx?version=patient&viewid=67eb4bdf-c9f8-4292-a463-b0c536064437

Diagnosis and Treatment Links

American Cancer Society (ACS)

- Cervical Cancer Profiler Treatment Decision Tools
<http://www.cancer.nexcura.com/Interface2.asp?CB=273&NewSession>

National Cancer Institute (NCI)

- Cervical Cancer (PDQ): Treatment
http://www.cancer.gov/cancer_information/doc_pdq.aspx?version=patient&viewid=862ac265-8ff9-4bc5-8b68-1458c603548d
- Clinical Trials
http://www.cancer.gov/clinical_trials/

Statistics Links

American Cancer Society (ACS)

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- Statistics

http://www.cancer.org/docroot/stt/stt_0.asp

Massachusetts Department of Public Health

- Massachusetts Community Health Information Profile (MassCHIP)

<http://masschip.state.ma.us/>

National Cancer Institute (NCI)

- Surveillance, Epidemiology and End Results (SEER) Cancer Statistics Review, 1975-2004

http://seer.cancer.gov/csr/1975_2004/

North American Association of Central Cancer Registries (NAACCR)

- *Cancer in North America* Publications

http://www.naaccr.org/index.asp?Col_SectionKey=11&Col_ContentID=50